

23,5

TT, T0, 60

## Ramlal Paul Higher Sec. School

Annual Examination - 2023-24

Subject: Mathematics

Class - VIII

16 2  
6 4

F.M. - 80

P.M. - 20

Time: 3 hrs.

- I. Choose the correct answer: 1 × 5 = 5
- I. Cube of an odd number is  
a) prime      b) even      ☒ c) odd      d) may be even, may be odd
- II. If the digit in one's place of a number is 2, then the ending digit of its cube will be  
a) 2      ☒ b) 4      c) 6      d) 8
- III. A bag has 4 red balls and 4 green balls, what is the probability of getting a red ball randomly  
a)  $\frac{1}{4}$       b)  $\frac{1}{8}$       ☒ c)  $\frac{1}{2}$       d) 0
- IV. If 20 - 30 is the class interval of grouped data, then the lower class limit is  
a) 50      b) 30      ☒ c) 20      d) 10
- V. Find the probability of getting a king from a well shuffled deck of 52 playing cards  
☒ a)  $\frac{1}{52}$       b)  $\frac{2}{52}$       c)  $\frac{2}{13}$       ☒ d)  $\frac{1}{13}$
2. Find the ratio of 50 paise to Rs. 5. 1  
*50 paise = 0.50 Rs. ∴ 0.50 : 5 = 1 : 10*
3. Convert 2 : 3 to percentages. 1  
 *$\frac{2}{3} \times 100 = \frac{200}{3} = 66.6$*
4. If a dice is thrown in the air, find the probability of getting a prime number? 1  
 *$\frac{3}{6} = \frac{1}{2}$*
5. When two coins are tossed, what is the probability of getting tail for both the coins. 1  
*666*
6. What is the value of  $\pi$ ? 1  
*3.1459*

$$3 \overline{) 200} \\ \underline{18} \\ 20 \\ \underline{18} \\ 20$$

Contd.:-

7. Fill in the blanks:

- (I) The co-ordinate of the origin is 0,0.
- (II) For any polyhedron,  $F + V - E = 2$ . This relationship is called Euler's formula.
- (III) Pictorial representation of data using symbol is known as graph.
- (IV) Surface area of cylinder is  $2\pi rh + 2\pi r^2$ .
- (V) Area of circle =  $\pi r^2$ .

8. Find the cube root of 110592 by prime factorization method.  $2 \times 2 \times 2 \times 2 \times 2 = 16$  2
9. Find the smallest number by which 128 must be divided to obtain perfect cube. 2
10. Draw a parallelogram MORE  
OR = 6cm, RE = 4.5cm, EO = 7.5cm 2
11. A closed cylindrical tank of radius 7m and height 3m is made from a sheet of metal. How much sheet of metal is required? 2
12. Plot the points on a graph sheet. Verify if A(4, 0), B(4, 2), C(4, 6), D(4, 2.5) lie on a line. 2
13. Draw the graph for the table of value with suitable scales on the axes. 3

Distance travelled by a car

Time (in hours)	6 a.m.	7 a.m.	8 a.m.	9 a.m.
Distance (in km)	40	80	120	160

14. Find the height of a cuboid whose volume is  $275\text{cm}^3$  and base area is  $25\text{cm}^2$ . 3

16. Find the height of the cylinder whose volume is  $1.54\text{m}^3$  and diameter of the base is 140cm. 3

17. The area of trapezium is  $34\text{cm}^2$  and the length of one of the parallel sides is 10cm and its height is 4cm. Find the length of the other parallel side. 3



18. Observe the following tables and find if  $x$  and  $y$  are directly proportional.

$$2 \times 2 = 4$$

(a)

$x$	<del>3</del>	<del>8</del>	<del>13</del>	<del>3</del>
$y$	<del>10</del>	16	26	6

(b)

$x$	10	6	14	22
$y$	8	4	12	20

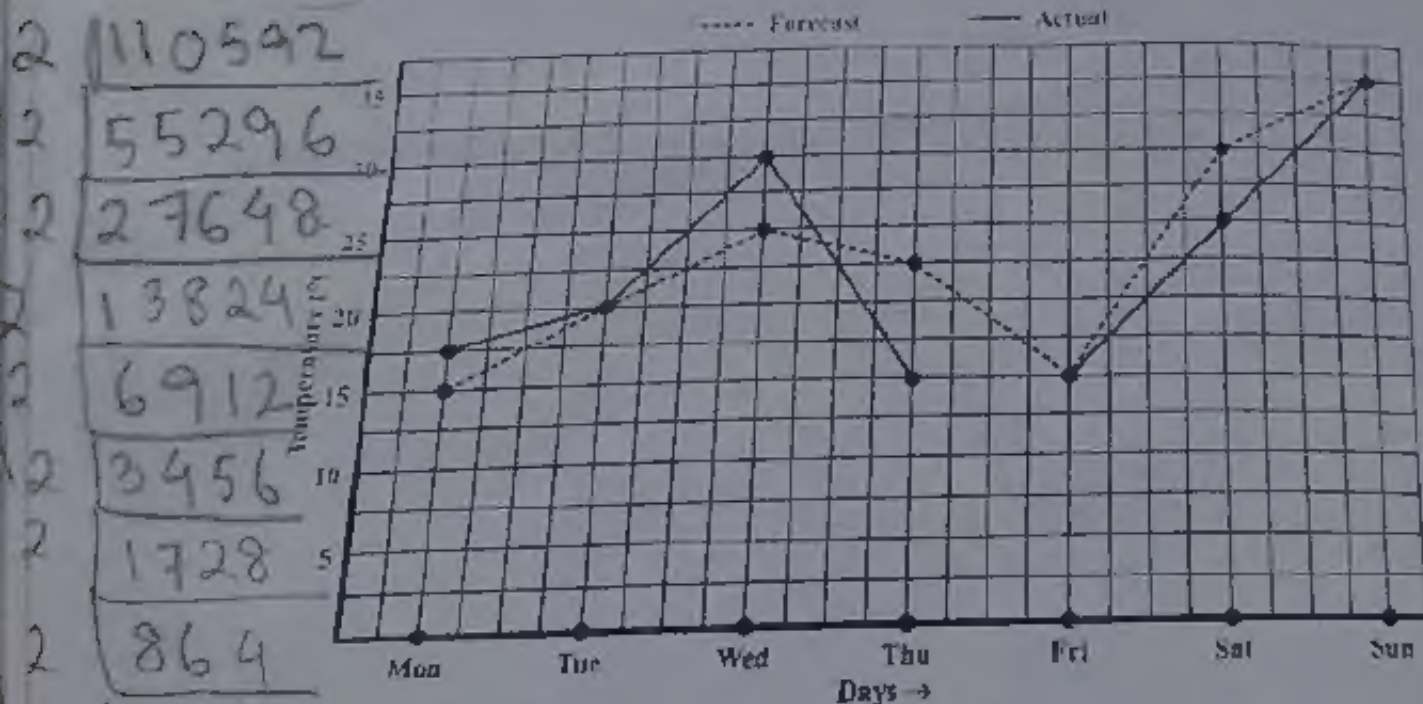
19. Draw a pie chart showing the following information. The table shows the colour preferred by a group of people.

Colour	Blue	Green	Red	Yellow	Total
Number of people	18	9	6	3	36

20. A photograph of a bacteria enlarged 50,000 times attain a length of 5cm. What is the actual length of the bacteria. If the photograph is enlarged, 20,000 times only, what would be its enlarged length.

21. A farmer has enough food to feed 20 animals in his cattle for 6 days. How long would the food last if there were 10 more animals in his cattle?

22. The following graph shows the temperature forecast and the actual temperature for each day of a week.



- (b) What was the maximum forecast temperature during the week?
- (c) What was the minimum actual temperature during the week?
- (d) On which day did the actual temperature differ the most from the forecast temperature.
23. An article was purchased for Rs. 1239 including GST of 18%. Find the price of the article before GST was added? 5
24. Kamala borrowed Rs. 26,400 from a bank to buy a scooter at a rate of 15% p.a compounded yearly. What amount will she pay at the end of 2 years and 4 months to clear the loan. 5
25. Construct the rectangle OKAY  
OK = 7cm, KA = 5cm 5
26. The weekly wages (in Rs) of 30 worker in a factory are  
830, 835, 890, 810, 835, 836, 869, 845, 898,  
890, 820, 860, 832, 833, 855, 845, 804, 808,  
812, 840, 885, 835, 835, 836, 878, 840, 868,  
890, 806, 840.  
Using tally marks, make a frequency table and draw a histogram with interval as 800 - 810, 810 - 820 and so on.

820 - 830  
830 - 840

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800 - 810  
810 - 820  
820 - 830  
830 - 840  
840 - 850  
850 - 860  
860 - 870  
870 - 880  
880 - 890  
890 - 900